UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,092	08/04/2005	Shari Weinberg	263065US55PCT	5417

22850 7590 07/23/2008

OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER	
GRAY, JILL M	

ART UNIT	PAPER NUMBER
1794	

NOTIFICATION DATE	DELIVERY MODE
07/23/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No.	Applicant(s)	
	10/518,092	WEINBERG ET AL.	
	Examiner	Art Unit	
	Jill Gray	1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/11/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

The prior art references set forth in the specification have been reviewed.

Specification

1. The use of the trademarks "REYMAG" and "RADEL" have been noted in this application. They should be capitalized wherever they appear and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-17, 25-27, 29, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by El-Hibri et al., 5,164,466 (El Hibri).

El-Hibri discloses a polymer composition comprising a blend of a polyphenylsulfone and a polysulfone wherein the polyphenylsulfone and polysulfone each have structural repeating units as claimed in present claims 1 and 13. In addition, El-Hibri discloses that the polyphenylsulfone comprises from about 25 to about 99 percent by weight and the polysulfone comprises from about 1 to 75 percent by weight,

which is in the ranges contemplated by applicants in claims 2-5 and 14-17. The polymer composition can be an insulation coating for electrical conductors. The skilled artisan would immediately envisage an insulated wire and method of coating said polymer composition on a bare wire, per claims 1 and 13. See entire document, for example abstract, formula (2), formula (3), column 3, lines 3-24, and column 6, lines 56-59. Also, El-Hibri discloses that the composition can contain other additives of the type set forth by applicants in claims 6-10. See column 6, lines 56-68. Regarding claims 11-12 and 25-26, the language of "can be a copolymer wherein up to less than 50 mole %..." is not limiting. This language does not constitute a clear positive recitation that the PPSF or PSF *are* copolymers, and the requirement of "up to less than 50 mole%" does not require the presence of the recited compound residues. Hence, the teachings of El-Hibri meet the requirements of these claims. Furthermore, it should be noted that El-Hibri discloses the same type of resins i.e. "RADEL R" and "UDEL P-1700" as disclosed by applicants in their specification as being suitable. Accordingly, the resin of El-Hibri necessarily meets the requirements of present claims 11-12 and 25-26. The polymer insulation and electrical conductor of El-Hibri anticipates the inventions of claims 27, 29, and 32.

Therefore the teachings of El-Hibri anticipate the invention as claimed in present claims 1-17, 25-27, 29, and 32.

4. Claims 1-3, 6-10, 13-15, 25-27, 29, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Harris, 4,957,978.

Harris discloses a polymer composition comprising a blend of from about 80 to about 99 percent by weight of a poly(aryl) ether sulfone and from about 1 to about 20 percent by weight of a second poly(aryl) ether sulfone. Each of the poly(aryl) ether sulfone resins have structural repeat units of the type contemplated by applicants in claims 1 and 13. See entire document, and for example, abstract and the Examples. The amounts of each component are within the instant claimed ranges set forth in claims 2-3 and 14-15. In addition, Harris discloses that the composition can contain additives of the type set forth by applicants in claims 6-10. See column 10, lines 56-64. Both poly(aryl) ether sulfone resins have aromatic dihydroxy compound residues that are as contemplated by applicants in claims 11-12 and 25-26. See Examples. Also, with regard to claims 12 and 26, Harris discloses the same polysulfone as that disclosed by applicants in their specification as being suitable. Hence, Harris necessarily discloses a polysulfone having the claimed critical aromatic dihydroxy compound residues. The polymer of Harris can be used as insulation for electrical conductors. The skilled artisan would immediately envisage an insulated wire and method of coating said polymer composition on a bare wire, per claims 1 and 13. The polymer insulation and electrical conductor of Harris anticipates the inventions of claims 27, 29, and 32.

Therefore, the teachings of Harris anticipate the invention as claimed in present claims 1-3, 6-10, 13-15, 25-27, 29, and 32.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-17, 25-29, and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Hibri 6,075,100 in view of Harris 4,957,978.

El-Hibri discloses a polymer composition comprising a blend of a poly(aryl ether sulfone) (polyphenylsulfone) and a polysulfone wherein the polyphenylsulfone and polysulfone each have structural repeating units as claimed in present claims 1 and 13, and are formed from the same type of aromatic dihydroxy compound residues set forth

in claims 11-12 and 25-26. See entire document, for example, abstract, column 3, lines 16-20 and column 4, lines 19-30. Also regarding claims 11-12 and 25-26, the language of "can be a copolymer wherein up to less than 50 mole %..." is not limiting. This language does not constitute a clear positive recitation that the PPSF or PSF *are* copolymers, and the requirement of "up to less than 50 mole%" does not require the presence of the recited compound residues. Hence, the teachings of El-Hibri meet the requirements of these claims. Moreover, El-Hibri discloses the same type of resins i.e. "RADEL R" and "UDEL P-1700" as disclosed by applicants in their specification as being suitable. Hence, the resins of El-Hibri necessarily have the requisite mole% of aromatic dihydroxy compound residues. Note Examples. The composition of El-Hibri can contain additional components such as reinforcing filler, fiber pigment and/or additive of the type contemplated by applicants in claims 6-10. See column 5, line 65 through column 6, and line 10. El-Hibri discloses that the blends comprise polyphenylsulfone in an amount of from about 50 to about 5 wt%, as required by present claims 2-3, 5, 14-15, and 17. It should be noted that the disclosed "about 50 wt%" necessarily includes amounts greater than 50 wt% because the term "about" means that exactitude is not being claimed and includes amounts greater than and less than the referenced amount. Hence the disclosed "about 50 wt%" renders obvious the instant claimed "greater than 50 wt%" and "about 55 wt%." Regarding claims 4 and 16, it is the examiner's position that since the result sought and the ingredients used were known, it was within the expected skill of one having ordinary skill in this art to arrive at the optimum proportion of those ingredients and any improved results would have

resulted from experimentation of an obvious nature and were nothing more than one would expect. *In re Reese*, 129 USPQ 402 (CCPA 1961).

El-Hibri does not disclose the specific usage as insulation for electrical conductors.

Harris is as set forth above and teaches a polymer composition comprising a blend of from about 80 to about 99 percent by weight of a poly(aryl) ether sulfone and from about 1 to about 20 percent by weight of a second poly(aryl) ether sulfone. Each of the poly(aryl) ether sulfone resins have structural repeat units of the type contemplated by applicants, further teaching that his polymer can be used as insulation for electrical conductors.

El-Hibri and Harris each teach blends comprising polyphenylsulfone and polysulfone, wherein the blends have good mechanical properties and thermal resistance and cost less. Moreover, Harris teaches a blend that is substantially similar to that disclosed by El-Hibri. Though El-Hibri is silent as to the utility as insulation for an electrical conductor, it would have been obvious to one of ordinary skill in this art at the time the invention was made to use the composition of El-Hibri as insulation for an electrical conductor, or more specifically, to coat said polymer on a bare metallic wire and produce an insulated wire as required by claims 1 and 13, with the reasonable expectation of success of producing a wire having good thermal and mechanical properties at a lowered cost motivated by the teachings of Harris that similar polymer blends are suitable as electrical insulation on conductors. As to claims 27, 29, and 32, the polymer insulation and electrical conductor of El-Hibri renders obvious the

inventions of claims 27, 29, and 32. Regarding claims 28 and 33, the formation of electrical devices such as transformers, motors, generators, alternators, solenoids, and relays using magnet wires is well known in this art. Accordingly, it is the examiner's position that to use the insulated conductor of El-Hibri and Harris to form any of the aforementioned electrical devices would have been an obvious expedient to one of ordinary skill in this art, and is not construed to be a matter of invention.

Therefore, the combined teachings of El-Hibri and Harris would have rendered obvious the invention as claimed in present claims 1-17, 25-29, and 32-34.

9. Claims 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Hibri et al., 5,164,466 or Harris, 4,957,978 or El-Hibri 6,075,100 in view of Harris 4,957,978, each as applied above, each in view of Hilker 4,391,848.

El-Hibri '466, Harris '978 and El-Hibri '100 in view of Harris '978 are all as applied above but do not teach the specific method steps for producing a magnet wire. Hilker teaches a method for forming a magnet wire wherein the coating material can be polysulfone, said method comprising a coating step that can be melt extruding that is free of solvent, per claims 18-20. In addition, Hilker teaches that the metallic magnet wire is preheated prior to coating said wire and that the insulation coating is melted prior to being coated on said wire, as required by claims 21-22. Also, Hilker teaches that the coated wire is hardened and that a quenching step can be included if desired, per claims 23-24. See entire document, in particular, abstract, column 3, lines 5-10, column 4, lines 31-37, column 5, line 17, column 7, lines 11-14, column 7, line 44, and column 9, lines 24-40.

As set forth above, Hilker teaches that polysulfone coating materials are suitable materials that can be used in his method. This teaching would have provided a suggestion to the skilled artisan that polysulfone resin blends could be used with a reasonable expectation of success of forming an insulated magnet wire. Accordingly, it would have been obvious to one having ordinary skill in the art to form a magnet wire by using the compositions of El-Hibri '466 or Harris '978 or El-Hibri '100 in view of Harris '978 as the coating material in the method of Hilker to produce a magnet wire.

Therefore, the combined teachings of El-Hibri '466 or Harris '978 or El-Hibri '100 in view of Harris '978, each taken in view of Hilker '848 would have rendered obvious the invention as claimed in present claims 18-24.

10. Claims 27-29 and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over El-Hibri et al., 5,164,466 or Harris, 4,957,978 or El-Hibri 6,075,100 in view of Harris 4,957,978, each as applied above, and each further in view of Gilliam 2,754,353.

El-Hibri '466, Harris '978 and El-Hibri '100 in view of Harris '978 are all as applied above and render obvious the invention as claimed in present claims 27-29, 32 and 33-34, for the reasons previously stated and incorporated herein. In the alternative, Gilliam teaches that the utility of magnet wires in electrical devices such as motors, generators or transformers is well known in the art. See entire document, for example, column 1, lines 15-19. Hence, it would have been obvious to the skilled artisan to use the insulated wires of El-Hibri '466 or Harris '978 or El-Hibri '100 in view of Harris '978 in the formation of articles such as motors, generators or transformers. Regarding claims 31

and 35, Gilliam teaches that the metallic wire is in contact with an insulating fluid such as silicone oil which increases the abrasion resistance and flexibility of the wire. It would have been obvious to one having ordinary skill in the art to include an insulating fluid in contact with the metallic wire in order to increase the flexibility and abrasion resistance of the wire.

Therefore, the combined teachings of El-Hibri '466 or Harris '978 or El-Hibri '100 in view of Harris '978, each taken in view of Gilliam would have rendered obvious the invention as claimed in present claims 27-29 and 31-35.

No claims are allowed.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note all prior art cited on the PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton I. Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jill Gray
Primary Examiner
Art Unit 1794

/Jill Gray/
Primary Examiner, Art Unit 1794